IN THE CLAIMS

Please amend the claims as follows:

1.(original) A method of providing threshold crossing timing recovery in an optical system, which optical system is adapted to read data signal samples from an optical disc, said method comprising the steps of

- reading data signal samples (ys) at a sampling time (ts) from the optical disc by means of the optical system,
- feeding the read data signal samples (ys) to a timing recovery means,
- determining timing error information (ψk) by means of the timing recovery means,
- adjusting the sampling time (ts) towards the synchronous timing instants (tk) on the basis of the timing error information (ψk),

characterized in that the method further comprises a step of multiplying the timing error information (ψk) by a weighing function W in succession of the step of determining the timing error information (ψk) and before the step of adjusting the sampling time (ts) towards the synchronous timing instants (tk).

2.(original) A method according to claim 1, characterized in that the timing recovery means is adapted to provide timing recovery to data signal samples coded in binary modulation.

3.(currently amended) A method according to claim 1 ~~any of the claims 1 or 2~~, characterized in that the weighing function W is a function of sk = |(yk - yk+1)/(tk - tk+1)|, where yk and yk+1,

respectively, are synchronized data signal samples and tk and tk+1, respectively, are synchronous sampling instants.

4.(original) A method according to claim 3, characterized in that W(sk) = sk/smax, where smax represents the maximum value of sk.

5.(original) A method according to claim 3, characterized in that W(sk) = (sk/smax)2, where smax represents the maximum value of sk.

6.(original) A method according to claim 3, characterized in that W(sk) = exp [1-(sk/smax)-1], where smax represents the maximum value of sk.

7.(currently amended) A method according to claim 1 ~~any of the claims 1 to 6~~, characterized in that the timing recovery means is adapted to provide timing recovery to data signal samples coded in RLL(d) coding.

8.(currently amended) A method according to claim 1 ~~any of the claims 1 to 7~~, characterized in that the threshold crossing timing recovery is a zero crossing timing recovery.

9.(currently amended) A method according to claim 7 ~~or 8~~, characterized in that the weighing function W is a function W(Tm, Tm+1), where the arguments Tm and Tm+1 are the two successive run lengths Tm and Tm+1, respectively, around a transition.

10.(original) A method according to claim 9, characterized in that the weighing function W(Tm, Tm+1) increases when the sum of Tm and Tm+1 increases.

11.(currently amended) A method according to claim 8 ~~any of the claims 8 to 10~~, characterized in that the weighing function W(Tm, Tm+1) decreases when the numerical difference |Tm-Tm+1| between Tm and Tm+1 increases.

12.(currently amended) A method according to claim 8 ~~any of the claims 8 to 11~~, characterized in that the weighing function W(Tm, Tm+1) is 0, if Tm equals "d+1" or if Tm+1 equals "d+1", where "d+1" is the shortest run length in the RLL coding.

13.(currently amended) An optical system for reading data stored on high capacity optical disc, characterized in that the optical system performs a method according to claim 1 ~~any of the claims 1 to 12~~.